FY 2015 REPORT TEMPLATE FOR NSF COMMITTEES OF VISITORS (COV)

The table below should be completed by program staff.

Date of COV: June 9-10, 2015
Program/Cluster/Section: Experimental Program to Stimulate Competitive Research (EPSCoR)
Division: Office of Integrative Activities (OIA)
Directorate: Office of the Director (OD)
Number of actions reviewed: **Research Infrastructure Improvement (RII) Sample: 35** **Co-funding (CF) Sample: 30** **Workshops & Conferences (W&C): 9** (includes one withdrawn) **Total: 74**
Total number of actions within Program/Cluster/Division during period under review: **Awards:** 773 (RII: 110 (includes Continuing Grant Increments); CF = 655; W&C =8) **Declinations:** 387 (RII = 64; CF = 323; W&C =0) **Other:** 14 (includes Principal Investigator (PI) Transfer, Return Without Review, and Withdrawn)
Manner in which reviewed actions were selected: Lists of all EPSCoR actions for the RII activities, co-funding actions, and W&C investments, as well as a representative sample of randomly selected RII and co-funding actions, from the FY 2012 – FY 2014 review period were made available to COV members in advance of the meeting. The EPSCoR proposal samples provided to the COV were chosen in consultation with the COV Chair. This sample was a balanced selection of actions, types of program investments, and geographical distribution of jurisdictions. The RII and CF samples along with the W&C actions were made available to the COV via e-Jacket. In total, the Committee had immediate electronic access (e-Jacket) to documentation for 74 EPSCoR actions.

COV Membership

	Name	Affiliation
COV Chair or Co-Chairs:	**Dr. Costello Brown**	Professor Emeritus, Department of Chemistry & Biochemistry California State University, Los Angeles
COV Members:	**Dr. Larry Dalton**	Professor Emeritus, Department of Chemistry University of Washington (Chair, 2012 COV)
	Dr. Tanya Furman	Professor, Department of Geosciences and Associate Vice President & Dean of Undergraduate Education Pennsylvania State University
	Dr. Le Gruenwald	Professor, School of Computer Science University of Oklahoma
	Dr. Michael Monticino	President, Academic Analytics LLC (on leave from University of North Texas)
	Dr. Loretta Moore	Professor, Department of Computer Science Jackson State University
	Dr. Knute Nadelhoffer	Professor, Ecology & Evolutionary Biology Director, U. Michigan Biological Station University of Michigan
	Dr. Juan Valdes	Professor, Department of Hydrology and Water Resources, University of Arizona (Member, 2012 COV)

INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program(s) under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

I. Questions about the quality and effectiveness of the program's use of merit review process. Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question**.**

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE
1. Are the review methods (for example, panel, ad hoc, site visits) appropriate? Comments: The review methods employed are appropriate for each of the different solicitations. Efforts made to select diverse review panels are valuable and successful. The reviews of panel participants indicate that knowledgeable subject experts are included in the proposal review process. There were cases in which a single reviewer appeared to influence the eventual consensus opinion of the panel. Continued care should be taken to include a sufficient number of reviewers with deep subject expertise so that particularly articulate and strongly held perspectives do not dominate panel recommendations.	Yes
2. Are both merit review criteria addressed a) In individual reviews? b) In panel summaries? c) In Program Officer review analyses? Comments:	a) Not consistently b) Yes c) Yes

a) There was wide variation in the comprehensiveness of the reviews provided by individual reviewers. The EPSCoR staff is clearly committed to helping reviewers understand the review criteria and the responsibility for providing substantive reviews. Most reviewers appear to take this responsibility seriously. However, there were a number of superficial, impression-oriented individual reviews that did not address many of the program-specific review elements. This suggests that additional efforts should be made to instruct *ad hoc* and panel participants on the types of reviews desired – perhaps, by providing "best practice" examples. The greatest variation in the substance of reviews was in evaluating the "broader impact" criteria. Reviews displayed substantial differences in interpreting what aspects of proposals classified as "broader impact." In particular, some reviews seemed to conflate intellectual merit and broader impact criteria. There also seemed to be less rigor applied to evaluating broader impact criteria than intellectual merit criteria. For instance, while the likelihood of successfully meeting the scientific goals stated in proposals was a significant part of many reviewers' evaluations of intellectual merit, the same assessments of broader impact related goals were rarely applied. There is a need to assess the balance between innovation and the likelihood of successful implementation. Again, EPSCoR staff could address the disparity in "broader impact" reviews by providing examples that appropriately address these criteria to both *ad hoc* and panel reviewers. EPSCoR staff should continue to emphasize the need for comprehensive, substantive reviews during the webinar training sessions for reviewers. Another strategy to ensure substantive individual reviews is for program officers to set early deadlines for reviewer responses and to follow up as appropriate by requesting deeper assessments prior to panel meetings. b) Panel summaries were consistent in comprehensively addressing review criteria and providing substantive analysis to support the consensus recommendations. This is reflective of the guidance provided by EPSCoR staff during the in-person panel sessions. c) Merit review criteria were comprehensively addressed in the Program Officers' review analyses. These analyses provided substantive, detailed account of proposal elements and the rationale for action recommendations.	

3. Do the individual reviewers giving written reviews provide substantive comments to explain their assessment of the proposals? Comments: As mentioned in I.2.a, there is a wide variation in the depth and breadth of comments provided by individual reviewers. Most reviewers provide substantive information supporting their overall assessments. However, a number of individual reviewers did not address the program-specific review elements. Instead, general – almost generic – statements about the overall quality of the proposal were provided. The greatest variation in the substance of reviews was in addressing the broader impact criteria. There was less rigor applied to assessing the broader impact criteria than for intellectual merit. Moreover there seems to be some misperception across reviewers about the scope of broader impact criteria. Some reviewers appear to conflate intellectual merit and broader impact criteria. Additional efforts should be made to instruct panel participants on the types of reviews desired by providing “best practice” examples.	Not consistent
4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)? Comments: The COV analyzed a sample of the panel reviews of the 74 projects made available to them. In all the proposals analyzed the panels provided a thorough discussion of the proposals, their strengths and limitations, and the reasons for recommending the projects for funding. Based on this evaluation a clear explanation was given for the 74 proposals in the jacket (41 recommended for funding and 33 declines). The panels did an excellent job considering the number and complexity of proposals submitted.	Yes
5. Does the documentation in the jacket provide the rationale for the award/decline decision? Comments: The documentation is adequate and provided all the necessary information for the decisions made by the Program Officers and reviewers. The information for the RII and CF decisions is comprehensive. As in the 2012 COV report, reviews of the Workshop & Conference proposals were briefer but still sufficient to illustrate the decision process.	Yes

6. Does the documentation to the PI provide the rationale for the award/decline decision? Comments: Documentation provided to Principal Investigators (PIs) includes a context statement, individual reviews, a panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the Program Officer. The PIs were provided with all the information required including both the *ad hoc* and individual panelist reviews and panel summary. The EPSCoR staff has carried out the process in an exemplary manner.	Yes
7. Additional comments on the quality and effectiveness of the program's use of merit review process:	

II. Questions concerning the selection of reviewers. Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question**.**

SELECTION OF REVIEWERS	YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE
1. Did the program make use of reviewers having appropriate expertise and/or qualifications? Comments: The Program Officers did excellent jobs of assembling peer review panels. In particular, they relied on multi-dimensional strategies to match panelists with science domain areas of specific projects as well as recruiting experts in Management, Evaluation, Cyberinfrastructure/Software, Data Management, Diversity, and Outreach categories which EPSCoR proposals are increasingly required to address. Resources employed by Program Officers, including individual levels of expertise and past reviewing performance, web-based search engines, suggestions of other reviewers from colleagues within NSF and other agencies, appear to be broadly effective.	Yes
2. Did the program recognize and resolve conflicts of interest when appropriate? Comments: The program has appropriately defined the types of conflicts of interests (COIs) that disqualify potential reviewers from evaluating specific proposals and has developed and adopted processes to identify real or perceived conflicts. It is noteworthy and commendable that Program Officers worked to identify COIs of prospective panelists prior to selecting reviewers and to disqualify panelists who have COIs with proposal PIs or institutions. Proper procedures have been put in place to remove panelists with conflicts from discussions and reviews of specific proposals when panelist COIs are pre-identified or recognized during panels.	Yes
Additional comments on reviewer selection: The COV commends the program for enlisting 34 to 51 percent female panelists, with higher percentages in FY 2013 (51%) and FY 2014 (45%). Relatively high percentages of researchers from underrepresented groups also populated panels; the percentage of panelists from underrepresented	

minority groups increased from 20% in FY 2012 to 28% and 29% in the two most recent years. Reviewers new to EPSCoR comprised 75 to 84% of panelists in the past three years. The program should consider the merits of balancing experienced and less experienced panelists. The COV recognizes that this imbalance likely results mainly from successful recruiting of females and members of underrepresented groups who are, on average, more likely to be recent entries of early career researchers into research and academic positions.	

III. Questions concerning the management of the program under review. Please comment on the following:

MANAGEMENT OF THE PROGRAM UNDER REVIEW
1. Management of the program. Comments: The EPSCoR program is effectively managed to achieve its stated mission: "…to assist the National Science Foundation in its statutory function, to strengthen research and education in science and engineering throughout the United States and to avoid undue concentration of such research and education." Program Solicitations are well written and clearly build on lessons learned from prior solicitation documents. The review of E-Jacket items including the correspondence, review process, award letters, external evaluations, annual reports, and un-obligated funds/ plans and budgets show an extraordinary attention to minute details and individual project management. The development and use of a "Compliance Checklist" for RII Track-1, 2, and 3 proposals by EPSCoR personnel is an example of this attention to detail and across-the-board accountability. Diary Notes (sometimes 5-pages in length) in the E-Jackets from Program Officers are well documented with a rich context and background that enables the reader to clearly understand the rationale for a specific action. Program Officers seem particularly responsive to PI questions and concerns and provide well-articulated correspondence to PIs on expectations and required deliverables with respect to their projects. Particularly noteworthy were several Diary Notes that gave rationales based on broadening participation for co-funding awards with other NSF Directorates. Profiles of both staff and management show a diverse group with respect to academic science, technology, engineering, and mathematics (STEM) disciplines, gender and underrepresented minorities. EPSCoR should also be commended for the recruitment of personnel with business/industry experience, along with a number of student interns. There is, however, some concern that only two of the six Program Officers (POs) are permanent. EPSCoR projects are quite complex and having 2/3 of the POs whose tenure is less than the 5-year duration of the projects that they manage is a distinct disadvantage.

2. Responsiveness of the program to emerging research and education opportunities.

Comments:

As part of its overall portfolio, EPSCoR makes both conference and workshop awards. A review of just a few of the funded workshops topics including the following: "Living on Earth III: Social-Ecological Systems"; "Bioinformatics to Foster Collaborative Research"; and "Strategic Synergies: STEM Pipeline" clearly demonstrate the responsiveness of the EPSCoR program to emerging research and education opportunities. Other workshop awards, as well as both the RII Track-1 and RII Track-2 awards, explore varying topics at the frontiers of science and engineering including sustainability, nanoscience, sensors, green energy, and engineered crops. EPSCoR's responsiveness to new and developing research frontiers is further demonstrated in the RII Track-1 program solicitation where an example as to how projects can integrate research and education by promoting multidisciplinary research is provided: "Integration of research and education by establishing research training groups for undergraduate or graduate students or similar appropriate mechanisms to encourage multidisciplinary research-based educational experiences, and connect with the private sector, industry, and national laboratories".

Another example of EPSCoR responsiveness to emerging research topics is that of *Seed Funding and Emerging Areas,* which provides flexibility for the RII Track-1 projects to respond quickly and effectively to new opportunities and pursue high risk/high impact and transformative research.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments:

The broad EPSCoR community continues to reflect upon, expand and improve their goals and processes. Recommendations from the *EPSCoR 2030 Workshop Report* dovetail with those of the 2012 COV by including emphases on cyberinfrastructure and communication, and also place renewed focus on increasing institutional research capacity while seeking additional funding and support for program sustainability and growth.

Two external and one internal review processes have taken place since the convening of the 2012 COV, and while the reports from these studies are complete, the NSF responses are still being written. In 2011, EPSCoR contracted with both the National Academy of Science (NAS) and the Science and Technology Policy Institute (STPI) for detailed programmatic reviews that would guide portfolio development and priority setting. The NAS review was prompted by the America COMPETES Reauthorization Act of 2010 and it examined all federal units with EPSCoR-like programs. The STPI review was directed towards an in-depth, life-of-program assessment of NSF EPSCoR activities and outcomes. Recommendations from these two reviews are more far-reaching than those of the COVs, including broad restructuring, resetting of eligibility guidelines and a more rigorous evaluation process. The NAS report specifically recommends concentrating on program elements that enhance research excellence and capacity for post-secondary training in STEM fields; the STPI report urges future evaluation efforts to focus on research competitiveness rather than

improvements in the science and engineering research base itself and recommends conducting some small and focused assessments that compare the research milieu in EPSCoR and non-EPSCoR jurisdictions.

Full responses to these recommendations have not yet been released, but all are in progress and appear to be on track for completion within the target time frame of fall 2015. EPSCoR worked closely with NSF senior leadership to revise the criteria for both eligibility and graduation (as recommended by both the NAS and STPI reports). Analysis of multiple scenarios was presented to the NSF Director and the National Science Board in May 2015 and is awaiting their response. Multi-agency recommendations of the NAS report were addressed by the EPSCoR Interagency Coordinating Committee in FY 2014, and have been approved by some agencies although not yet by NSF or NASA. This step will follow approval by the National Science Board of the NSF response to specific recommendations and is currently in progress.

Several steps have already been taken to strengthen evaluation of individual projects and their collective impact at the program level. EPSCoR emphasizes and requires third-party project evaluation and assessment in RII Track-1 projects. The Drupal content management platform (originally funded through an EPSCoR Supplement award) is being used more broadly across EPSCoR jurisdictions, and its use has been communicated to Project Directors and Administrators at their recent semiannual meetings. Full development of program-level assessment and evaluation must of necessity follow adoption of revisions to the eligibility and graduation requirements. Finally, an EPSCoR action plan that is informed by STPI recommendations is currently in progress and it, too, awaits response to the revised eligibility framework by the NSF and National Science Board.

In addition to reviews by the NAS and STPI, the NSF EPSCoR undertook an internal process of Strategic Planning to reflect upon the recommendations of external parties and to provide a strong platform from which responses are prepared. EPSCoR's new goals focus on: (1) catalysis of development in research capacity and the creation of new knowledge that expands scientific discovery, innovation, learning and knowledge-based prosperity; (2) establishment of sustainable STEM pathways in education, training and professional development in areas defined by individual jurisdictions; (3) broadening participation of diverse individuals and groups, (4) effecting sustainable engagement of project participants and partners among individual jurisdictions, the national research community and the general public; and (5) impacting research, education and economic development beyond the scope of individual projects to reach the academic, governmental and private sectors. Clear steps towards action in each of these five areas have been defined and are ongoing.

4. Responsiveness of program to previous COV comments and recommendations.

Comments: The EPSCoR program has taken a strong and proactive approach to responding to prior COV recommendations. In particular, subsequent to the 2012 COV report, EPSCoR responded annually to each of the seven recommendations. The program has clearly improved its processes around preparation of reviewers and COV members, including providing informational webinars and ensuring continuity and institutional memory in COVs. Some highlights of this process are shared below.

The role of cyberinfrastructure in EPSCoR solicitations, and of reviewers with expertise in cyberinfrastructure in the funding process, has been increased and well documented. The program encourages collaboration through consortia defined across jurisdictions and regions, and has amended the RII Track-1 and 2 solicitations to reflect this new emphasis.

Increasing the involvement of early-career professionals as reviewers and in project operations has clearly provoked thoughtful conversation within the program. Revised program guidelines now require reporting on new investigators and the percentage of early- and mid-career faculty engaged as panelists has increased. The large scale and scope of major RII projects appear to fare best when the PI is a senior and experienced researcher, but many of these projects also involve the explicit recruitment, mentoring and retention of more junior colleagues. Through this mechanism, EPSCoR increases participation and diversity among the growing future PI pool.

Data gathering and management have become both mandatory (since 2009) and standardized, and staff have been added to carry out the important function of tracking effectiveness of EPSCoR programs. Project reports now include quantitative and qualitative data documenting notable achievements in research, education, faculty hiring, postdoctoral researcher engagement, and in financial matters including cost sharing. A Drupal open source content management platform was implemented in 2013, and is being piloted by five jurisdictions. The results of this process are discussed at semi-annual meetings among Project Directors and Administrators. The future sustainability of this project is being studied.

Staffing recommendations made by the 2012 COV have been implemented.

IV. Questions about Portfolio. Please answer the following about the portfolio of awards made by the program under review.

RESULTING PORTFOLIO OF AWARDS	APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE
1. Does the program portfolio have an appropriate balance of awards across disciplines and sub-disciplines of the activity? Comments: The RII Track-1 proposals are aligned with the jurisdiction's Science and Technology (S&T) plan. The technical areas covered are comprehensive, across disciplines and sub-disciplines supported by all NSF Directorates and Offices. The co-funding effort that involved every NSF Directorate as well as every Office that received proposals is commendable. To address some findings of the EPSCoR 2030 Workshop report, EPSCoR started the RII Track-3 solicitation in 2013 seeking proposals for building diverse communities; this is an excellent idea and has resulted in a good number of awards (a total of ten RII Track-3 projects were awarded in fiscal years 2013 and 2014). The workshops and conferences awards covered a good number of important areas. For the efforts of increasing broader impacts, EPSCoR is especially commended for having organized the successful workshops "Science: Becoming the Messenger" that train EPSCoR jurisdictions' scientists, engineers, and institutional public information officers on how to communicate science effectively to a broad audience.	Appropriate
2. Are awards appropriate in size and duration for the scope of the projects? Comments: The awards for RII Track-1 and RII Track-2 are appropriate in size and duration for the scope of the projects. The RII Track-3 awards are also appropriate given their experimental nature.	Appropriate
3. Does the program portfolio include inter- and multi-disciplinary projects?	Appropriate

Comments: By definition, all of the RII awards are inter- and multi-disciplinary, where RII Track-1 projects involve multiple institutions and RII Track-2 projects multiple jurisdictions. The research foci for each RII Track-1 project include two or more scientific themes, which requires collaboration across disciplines.	
4. Does the program portfolio include projects that integrate research and education? Comments: It is clear across the funded projects that the integration of research and education is very important. For EPSCoR RII Track-1 projects, the solicitation is designed such that education elements are required and supported through formal educational strategies as well as through opportunities for undergraduate and graduate student involvement in research, workforce development, and external engagement with other constituents. Many projects within the portfolio also engage K-12 teachers and local community groups. Research and education integration are also apparent in those projects in the RII Track-2 and Track-3 portfolio. The annual reporting templates ensure that this information is tracked consistently across the projects.	Appropriate
5. Does the program portfolio have appropriate participation of underrepresented groups[1]? Comments: The RII Track-1 workforce development demographics (and additional materials not in the self-assessment) indicate that there has been an increased effort to involve undergraduate students from groups historically underrepresented in the STEM fields. Most notable is the involvement of women who make up a significant percentage of all participants from undergraduate students to faculty, and the large number of Native American participants in key jurisdictions. There has been, however, a substantial decline in the number of African American and Hispanic participants from FY 2012 to FY 2014 (primarily in three jurisdictions) that affects greatly the overall diversity profile of the projects. RII Track-2 projects' annual reports indicate strong efforts and much success in workforce diversification. The addition of the RII Track-3 awards provides a	Appropriate

[1] NSF does not have the legal authority to require principal investigators or reviewers to provide demographic data. Since provision of such data is voluntary, the demographic data available are incomplete. This may make it difficult to answer this question for small programs. However, experience suggests that even with the limited data available, COVs are able to provide a meaningful response to this question for most programs.

new focused route for jurisdictions to develop opportunities to increase workforce diversity. There is a great need for the development of systems to support the disaggregation of data for more accurate reporting so that the true impact of the EPSCoR program on diverse populations can be identified. Similarly, data on the demographics of the PIs and co-PIs across all EPSCoR RII Tracks would be beneficial.	
6. Is the program's post-award management/oversight appropriate? Comments: EPSCoR has a well-organized approach to post-award management and oversight. The strategic planning requirement for RII Track-1 awards ensures that teams clearly articulate plans to ensure goals, objectives, activities, expected outcomes, and timelines are achieved. The recent adoption of the Drupal platform for tracking and analyzing longitudinal outcome data should facilitate the early identification of successful practices and correction of less effective activities. The solicitation's requirement that projects designate an external evaluator is an excellent way of monitoring progress using quantitative and qualitative measures. The requirement to establish and work with an external advisory board provides important technical and operational expertise to awardees, promoting and monitoring the progress of complex projects. Likewise, the reverse site visits for RII Track-1 projects provide opportunities for direct observations of project progress and critical feedback. Moreover, each EPSCoR jurisdiction is required to have a steering committee. Collectively these mechanisms ensure that project strategic plans are designed, followed and adapted as necessary.	Appropriate
7. Additional comments on the quality of the projects or the balance of the portfolio or post-award management activities:	

OTHER TOPICS

1. Please comment on any program areas in need of improvement or gaps (if any) within program areas.

a) Site Visits: Currently the post-award management of RII Track-1 awards includes two Reverse Site Visits and annual informal site visits by the managing Program Officer. The COV suggests that formal site visits be conducted during the award period. This assessment with a panel of experts will be beneficial feedback to both NSF EPSCoR and the jurisdictions.

b) Staffing: As mentioned in III.1, COV is concerned about the ratio of permanent to rotating Program Officers. It would help improve post award management continuity with 5-year projects, if more Program Officers are permanent in the program.

2. Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

3. Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

- To help individual jurisdictions and their associated institutions in graduating from the EPSCoR program, assistance should be provided to guide PIs to the most appropriate solicitations and programs for their efforts. This information is not clearly available on NSF web sites, and frequent changes in program and solicitation names make it challenging to prepare for future proposal submissions. Such efforts could help maintain forward momentum for successful jurisdictions.

- The role and significance of broader impacts should remain a critical focus of NSF activities. Reviewers should be trained in identifying best practices and panel members should be held accountable for meaningful review of broader impacts in each proposal.

- Evaluation of individual proposal jackets found that several *ad hoc* reviewers wrote brief and uninformative reviews. We recommend having the *ad ho*c reviews considered by the Program Officer at least one week prior to the panel meeting, so that such weak reviews can be returned to the reviewer with a clear request for additional documentation.

4. Please provide comments on any other issues the COV feels are relevant.
- The pre-COV meeting webinars were extremely helpful, and enabled the group to be productive immediately upon arrival at NSF headquarters.

5. NSF would appreciate your comments on how to improve the COV review process, format and report template.
- The common COV template for disciplinary directorates does not align consistently with the goals and processes of the EPSCoR program. A review of questions, and perhaps the inclusion of program-specific questions, would be helpful to future COVs. One key feature of EPSCoR is the responsiveness to jurisdictional priorities, and the COV template does not capture this facet of the program.

- The incorporation and analysis of disaggregated gender and ethnicity data for project participants would be helpful in assessing program impacts and outcomes. Specifically, identifying participant gender and ethnicity at the various educational levels (e.g., K-12 students, post-doctoral researchers, and faculty members) would benefit the program and

reviewers. Disaggregated data should be provided both within and across projects and jurisdictions.

Recommendations

1. As is the case NSF-wide, there was a wide variation in the comprehensiveness of evaluations provided by individual/*ad hoc* reviewers. Evaluation of individual proposal jackets found that some reviewers wrote brief and uninformative reviews. The COV endorses the improvement made in the EPSCoR review process by the teleconference training of panelists. The COV recommends exploration of a mechanism for extending training to reviewers.

2. The role and significance of broader impacts remains a critical issue for NSF. Reviewers should be trained in identifying best practices and panel members should be held accountable for meaningful review of broader impacts in each proposal.

3. Quantitative data on EPSCoR outcomes including the full range of broader impacts with respect to education and diversity are important for COV evaluation of the EPSCoR program. The COV commends the EPSCoR program for attempting to address this situation by improved collection of data. However, the COV encourages the best possible disaggregation of data and making that data available to future COVs.

4. The RII Track-3 solicitation appears promising, and should be continued and assessed in future years. In order to capitalize on the longitudinal opportunities within this program, the budget limitation of RII Track-3 awards should be increased to more than $750 K.

5. Workshop and conference awards have covered a number of important topics. We recommend expansion to include more emerging topics, such as Big Data and multi-scale modeling and analysis.

6. The current COV template does not align consistently with the goals and processes of the EPSCoR program. A review of questions, and perhaps the inclusion of program-specific questions, would be helpful to future COVs. One key feature of EPSCoR is the responsiveness to jurisdictional priorities, and the COV template does not capture this facet of the program.

7. It is recommended that EPSCoR establish a standing Advisory Committee, that would provide regular and sustainable advice to the program. An Advisory Committee can be justified on the basis of the uniqueness of the program and the mostly rural states that they serve.

8. The COV recommends the implementation of formal Site Visits as part of the post award management for RII Track-1 and 2 projects.

9. The ratio of permanent to rotating Program Officers in EPSCoR should be increased to help improve award management continuity during the 5-years of RII Track-1 awards.

The Committee of Visitors is part of a Federal advisory committee. The function of Federal advisory committees is advisory only. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the Advisory Committee, and do not necessarily reflect the views of the National Science Foundation.

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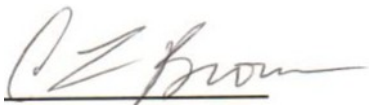

Costello Brown, COV Chair

Date